MACHINE MOUNTING ADAPTER

EV242770022US

This application claims benefit of provisional application Ser. No. 60/460,480, filed April 4, 2003.

Background of the Invention:

The present invention relates generally to assemblies for mounting one machine on top of another, and more specifically to assemblies that are adaptable in their ability to permit the mounting of variously dimensioned machines to a standard sized base machine.

It is often required that machines having differing functionalities be assembled together, resulting in a device having the combined abilities of both. Frequently, the machines that are so combined are not made by the same manufacturer and are not dimensioned to fit together properly. It therefore is often necessary to build specially designed adapting structures or mountings that accommodate differences in machine configurations to permit the securing together of two or more machines to form the desired functional whole. It is expensive and time consuming to be required to specially manufacture custom mounting hardware. It also is costly to be required to have an inventory of various mounting kits for each of a variety of possible machine configurations and combinations.

The above problem is illustrated specifically in the case of mounting an icemaker to the top of an ice and beverage dispensing machine. As is known, ice/beverage

dispensing machines include ice retaining hoppers or bins having top ice loading openings. A top bin cover is used to cover the bin opening and is removable to permit manual filling of the ice bin with ice. Filling is typically accomplished by lifting and emptying individual buckets of ice into the bin until it is sufficiently full. To eliminate the difficulties associated with manually filling bins and to minimize the occasions when the bins may be emptied of ice, it has long been known to mount an icemaker to the top of the ice/beverage machine, so that as ice is made it drops directly from the icemaker into the ice bin. However, the particular icemaker selected can be from one of several manufacturers having various and differently dimensioned footprints that may or may not accommodate direct mounting of the icemaker on top of a given ice/beverage dispensing machine.

Accordingly, it would be desirable to have a single mounting kit or system that is easily adaptable to permit quick and efficient adaptation of one of a variety of differently dimensioned machines to a particular standard base machine.

Summary of the Invention:

The present invention concerns an adapter device for accommodating mounting of a variety of differently dimensioned machines on top of a standard sized base machine. In the illustrated embodiments, an ice and beverage dispensing machine forms a standard base unit and includes an ice retaining bin having a top opening defined by a perimeter edge. The invention includes a cover that fits over the bin top opening while being supported on the perimeter edge of the bin. The cover includes an ice drop opening over which an icemaker is mounted. The cover also has

a first bar receiving channel adjacent to and extending along one end of the ice drop opening and a plurality of second bar receiving channels adjacent to and extending along an opposite end of the ice drop opening. A first rigid bar is placed in the first channel and a second rigid bar is placed in a selected one of the second plurality of channels, the selection being made in accordance with the width of the base of the icemaker, so that the two bars span the width of the ice bin and are spaced by a distance that provides optimum support for the base of icemaker. The ice retaining bin perimeter edge advantageously includes notches positioned in accordance with and for receiving opposite lower ends of the bar receiving channels to provide for better retention of the cover on top of the ice bin. In an alternate embodiment, a pair of rigid bars spans the ice bin opening and opposite ends of the bars are placed directly into the notches formed in the perimeter edge of the bin opening. A cover is then placed on top of the ice/beverage dispensing machine and bars, after which the icemaker is secured to the cover above the ice drop opening and bars.

Brief Description of the Drawings:

Fig. 1 shows a perspective view of a combination ice and beverage dispenser as is known in the prior art;

Fig. 2 shows an exploded view of an embodiment of the adapter device of the present invention;

Fig. 3 shows a perspective view of the embodiment of Fig. 2;

Fig. 4 shows an exploded view of a further embodiment of the adapter device of the present invention, and

Fig. 5 shows a perspective view of the embodiment of Fig. 4.

Detailed Description:

An ice and beverage dispensing machine is seen in Fig. 1 and generally referred to by the numeral 10. As is known, the dispenser includes an outer housing 12, a merchandising cover 14, an ice retaining hopper or bin 16 and a removable ice bin cover 18. As is also known, the dispenser includes a plurality of beverage dispensing valves 20, a drip tray 22 and splash panel 24. The bin 16 is located within the outer housing 12 and includes a top ice filling open end 27 defined by a perimeter ice bin edge 28.

As seen in Figs. 2 and 3, the machine mounting adapter of the invention includes a specially configured top cover 30 that is used in place of the standard bin cover 18. The cover 30 includes an ice drop opening 32 and a rearward bar receiving channel or groove 34 that is recessed into the top surface of the cover and extends generally between opposite sides of the cover and adjacent to and along a rear end or edge of the ice drop opening for receiving therein a rearward rigid metal bar 35a. The cover 30 also includes a plurality of spaced and parallel forward bar receiving channels or grooves 36 that are recessed into the top surface of the cover and extend generally between opposite sides of the cover and adjacent to and along a front end or edge of the ice drop opening 32 for receiving a forward rigid metal bar 35b in a selected one of the channels 36. In addition, the cover 30 has an ice filling hole or opening 40 over which a removable separate cover 42 extends. When the cover 30 is placed on top of the ice bin 16, a first pair of rearward notches 28a formed on opposite sides of the ice bin perimeter edge 28 are located to correspond with and receive

opposite lower ends of the rearward channel 34 and a plurality of forward paired notches 28b formed on opposite sides of the ice bin perimeter edge are located to correspond with and receive opposite lower ends of the forward channels 36.

In use of the machine mounting adapter of the invention, the cover 30 replaces the standard cover 18, the rearward rigid bar 35a is placed in the rearward cover channel 34 and the forward rigid bar 35b is placed in a selected one of the forward cover channels 36. The particular forward channel 36 into which the forward bar 35b is placed is determined on the basis of the front to back width W of the base or footprint of an icemaker 50 that is to be supported on top of the cover 30 when the cover is placed on the perimeter edge 28 of the ice/beverage dispenser 10. More specifically, the forward channel 36 that receives the forward bar 35b is selected so that when the icemaker 50 is mounted on top of the cover 30 of the ice/beverage dispenser, the rearward and forward rigid bars 35a-b will be spaced apart a distance such that with the rearward channel bar 35a located generally directly beneath and extending along a rear end 54 of the icemaker 50, the forward bar 35b will be located generally directly beneath and extend along a front end 52 of the icemaker. The forward and rearward bars 35a-b will then be positioned to provide a strong and stable support for the weight of the icemaker on the ice retaining bin 16 of the ice/beverage dispenser 10. Thus, by virtue of providing the plurality of spaced and parallel channels 36, the spacing between the forward and rearward bars 35a-b can be selectively controlled such that a wide variety of differently sized icemakers can be accommodated and securely mounted on top of the ice/beverage dispenser, simply by appropriate selection of the forward channel 36 into which to place the forward bar

35b. It is to be appreciated that with the icemaker 50 mounted on top of the ice/beverage dispenser, the cover 42 is removable to expose the hole 40 and provide a convenient means for manually filling the ice bin 16 should the icemaker fail for any reason. Once the icemaker is in position on the cover 30, it can be secured to the cover by any suitable attachment means, such as by use of simple L-shaped angle brackets 56 and appropriate screw type securing fasteners.

An alternate embodiment of machine mounting adapter of the invention is seen in Figs. 4 and 5 and includes a specially configured cover 60 for use in place of the standard cover 18. The cover 60 has a hinged front door 62 and a rear portion 64 with an ice drop hole 66 therethrough. In this embodiment, the rearward and forward bars 35a-b are not received in channels recessed into the top of the cover 60. Instead, the rigid metal bars 35a-b extend across the ice bin perimeter edge 28, with opposite ends of the rearward bar 35a being received directly in the rearward notch pair 28a and opposite ends of the forward bar 35b being received directly in a selected pair of the plurality of forward notch pairs 28b. The cover 60, when supported in the ice retaining bin perimeter edge 28, then extends over the bars 35a-b. This embodiment works much the same as was described above for the embodiment of Figs. 2 and 3, such that the notch pair 28b that receives the forward bar 35b is selected in accordance with the front to back width of a footprint of an icemaker 50 that is to be mounted on top of the cover 60. The hinged access hatch or door 62 provides a means for permitting manual filling of the ice bin 16.

While embodiments of the invention have been described in detail, various modifications and other embodiments thereof may be devised by one skilled in the art

without departing from the spirit and scope of the invention, as defined in the appended claims.